

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/033063

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F01N3/023 F01N3/027 F01N3/035

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 404 795 A (KOBASHI KIYOSHI ET AL) 20 September 1983 (1983-09-20) column 4, line 36 - column 10, line 32; figures 2,5	1,3-6,9, 13-15,18
X	GB 892 659 A (SCHWEIZERISCHE LOKOMOTIV) 28 March 1962 (1962-03-28) the whole document	1,2,4,5, 12,18
X	US 4 902 309 A (HEMPENSTALL GEORGE T) 20 February 1990 (1990-02-20) abstract	1,3-7,18
A		8
X	EP 1 333 169 A (EBERSPAECHER J GMBH & CO) 6 August 2003 (2003-08-06) paragraph '0019! - paragraph '0037!; claim 1; figure 1	1,3-6, 10,11, 16,18
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the international search

Date of mailing of the international search report

24 January 2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 020 620 A (VOLKSWAGENWERK AG) 19 July 2000 (2000-07-19) paragraph '0020! - paragraph '0031! -----	1, 2, 4-7, 18

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat	Application No
	PCT/US2004/033063

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 4404795	A 20-09-1983	JP JP JP	1390402 C 57008311 A 61057925 B	23-07-1987 16-01-1982 09-12-1986
GB 892659	A 28-03-1962	NONE		
US 4902309	A 20-02-1990	NONE		
EP 1333169	A 06-08-2003	DE EP	10204073 A1 1333169 A1	14-08-2003 06-08-2003
EP 1020620	A 19-07-2000	DE AT DE EP	19900967 A1 261544 T 59908807 D1 1020620 A1	20-07-2000 15-03-2004 15-04-2004 19-07-2000